Title: POWER MANAGEMENT TOPOLOGIES

REMARKS

The Final Action mailed June 12, 2007 has been carefully considered. Reconsideration

and allowance of the subject application, as amended, are respectfully requested. Claim 1 has

been amended to overcome the Examiner's formal rejections thereto, and to further define the

invention over the art. No new matter has been added to the subject application as a result of the

changes made thereto.

As an initial matter, the undersigned attorney wishes to thank the Examiner for the

telephonic interview held on June 27, 2007. No agreement was reached during that interview.

Claim 1 stands rejected under 35 USC 102(b) as being anticipated by Cowen et al. (US

4,812,672). Applicants respectfully submit this rejection is in error.

Claim 1 has been amended, inter alia, to include:

a power management control circuit configured to monitor the voltage of said battery and control the output voltage of said controllable DC power

source to be within a selected tolerance range of said voltage of said

battery;

Thus, claim 1 as currently amended includes limitations to specifically point out that the

controllable DC power source is controlled so that its output is within the range of the output of

the battery. Support for this limitation may be found, for example, on Page 12, lines 5-8.

It is Applicant's understanding that Cowen teaches a circuit for selectively connecting or

disconnecting one of two power supplies, connected in parallel, in the event of the failure of one

of the power supplies. Referring to Figures 2 and 3 of Cowen, it appears that the power supplies

500 and 600 are batteries, i.e., constant voltage sources. Importantly, nowhere does Cowen

disclose or suggest a battery and a controllable DC power supply in parallel to supply power to a

load. Moreover, Cowen does not teach a power management circuit that controls the output

voltage of the controllable DC power source to be within a selected tolerance range of the voltage

of the battery. Thus, Cowen could not anticipate claim 1.

Serial Number: 10/652,110 Filing Date: August 29, 2003

Title: POWER MANAGEMENT TOPOLOGIES

Thus, it is evident that Cowen lacks all of the requirements of claim 1, and thus, it is respectfully submitted that the Examiner's reliance on Cowen to anticipate claim 1 is in error, and should be withdrawn.

Claims 7-13 stand rejected under 35 USC 103 as being unpatentable over Cowen in view of Furukawa et al. (US 6,225,708). Applicants respectfully submit this rejection is also in error.

It is Applicants understanding that Furukawa teaches an uninterruptible power supply topology. Referring to Figure 2, it appears that this topology supplies power to either load 200 or load 202 from either source 32 or 36. If source 32 is used to power load 200, a step down converter 46 is used. If source 32 is used to power load 202, no conversion is necessary. Similarly, if source 36 is used to power load 200 step down converter 46 is used, and if source 36 is used to power load 202, a step-up converter 44 is used.

Claims 7-13 depend from claim 1, discussed above. Even if one combines Furukawa with Cowen, as suggested by the Examiner, the limitations of claim 1 are not fully met. example, Furukawa does not disclose or suggest a parallel power supply mode, nor does Furukawa disclose or suggest controlling a controllable DC power supply to be within a tolerance range of the battery.

The Examiner's reasons for combining Furukawa and Cowen, as set out at Pages 4 and 5 of the Final Action, are not entirely clear. Applicant believes that the Examiner is suggesting that one of the batteries (500 or 600) of the system of Cowen could be replaced by the DC/DC converter system 30 of Furukawa. However, even if one were to be motivated to modify Cowen in this manner, it is respectfully submitted that this combination still lacks essential features of claim 1. For example, such a modification would not provide "a power management control circuit configured to monitor the voltage of said battery and control the output voltage of said controllable DC power source to be within a selected tolerance range of said voltage of said battery" as required by claim 1. Indeed, these features are nowhere disclosed or suggested by neither Cowen nor Furukawa, alone or in combination.

These features provide significant advantages that are not achieved by the combination of Cowen and Furukawa. For example, in the parallel power supply mode set forth in claim 1, by monitoring the voltage of the battery and controlling the output of the DC/DC converter to be

Amendment E and REQUEST FOR CONTINUED EXAMINATION

Serial Number: 10/652,110

Filing Date: August 29, 2003

Title: POWER MANAGEMENT TOPOLOGIES

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within a tolerance of the battery, enables the avoidance of cross-conduction between the battery

and the converter. Further, these features as set forth in claim 1 provide an efficient and low-cost

mechanism of providing additional power when peak load power demand is high.

Thus, it is respectfully submitted that the Examiner's rejection of claims 7-13 as being

unpatentable over Cowen in view of Furukawa is in error, and should be withdrawn.

Having dealt with all the objections raised by the Examiner, it is respectfully submitted

that the present application, as amended, is in condition for allowance. Thus, early allowance is

earnestly solicited.

If the Examiner desires personal contact for further disposition of this case, the Examiner

is invited to call the undersigned Attorney at 603.668.6560.

Respectfully submitted,

Bucur et al.

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